GAMATRONIC™

Our Power, Your Confidence

SMART COMPACT UPS

User's Manual

☐ 650 VA ☐ 750 VA ☐ 1000 VA ☐ 1500 VA

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GAMATRONIC ELECTRONIC INDUSTRIES LTD.
17 Hartom St., P.O.B. 45029, Jerusalem 91450, Israel
Tel: 972-2-588-8222 Fax: 972-2-582-8875
Email: info@gamatronic.co.il Website: www.gamatronic.com

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Gamatronic Electronic Industries Ltd.
Har Hotzvim Industrial Park
17 Hartom St., PO Box 45029, Jerusalem 91450 Israel
Tel: +972-2-588-8222 Fax: +972-2-582-8875
Email: info@gamatronic.co.il Website: www.gamatronic.com

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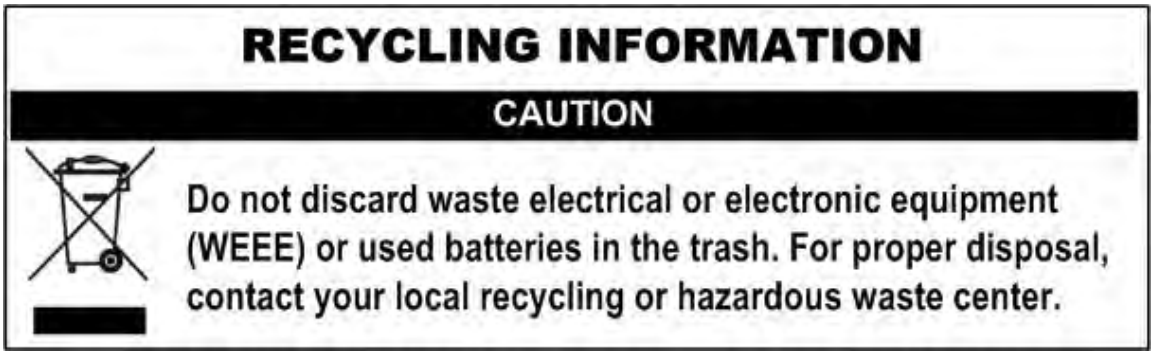
RECYCLING INFORMATION
CAUTION
Do not discard waste electrical or electronic equipment (WEEE) or used batteries in the trash. For proper disposal, contact your local recycling or hazardous waste center.

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1. SAFETY PRECAUTIONS

1.1 Do's

- Read this manual carefully before operating the UPS.
- Review these safety precautions to avoid damaging users or equipment.
- Install the UPS in a stable, clean, dry and well-ventilated location. Do not expose the UPS to direct sunlight or to sources of high heat.
- Leave at least 20 cm of clearance space between the ventilation holes of the UPS and other objects or walls.
- The UPS must be grounded to the building's grounding system. Ensure that the power outlet you use is properly grounded.
- The UPS contains batteries. Improper treatment of the UPS can result in electric shock, even when the UPS is not connected to the ac power mains.
- Ensure that foreign objects do not enter the UPS's ventilation holes.
- Allow only qualified technicians to service the UPS. There are no user-serviceable components. **Do not try to repair it yourself!**

⚠ WARNING ⚠

Appropriate precautions should be taken during inspection and servicing; there is a risk of lethal electric shock. The battery cabinet contains 12-Volt batteries that provide high voltage even when the UPS is not connected to the mains.

1.2 Don'ts

- Do not open the cover under any circumstances.
- Do not insert any objects through the ventilation holes.
- Do not place objects on the top of the UPS.
- Do not move the UPS while it is operating.
- Do not turn the UPS upside down during transportation.
- Do not turn on the UPS when it is disconnected from the ac power mains.
- Do not disconnect the UPS from the power mains until the UPS is turned OFF.
- Do not place the ac power supply cord where it will be subject to strain or abuse.
- Do not turn on the UPS when it is disconnected from the ac power mains.
- In the event that the UPS is in storage for an extended period of time, recharge the UPS batteries by connecting the UPS to the ac power mains for 8 hours.
- Do not use any liquid cleaners to clean the UPS. Use a dry cloth only.

⚠ WARNING ⚠

Do not touch the battery terminals of external batteries with bare hands.

2. OVERVIEW

2.1 Introduction and specifications

Gamatronic is proud to present to you the line-interactive **SMART COMPACT UPS** (Uninterruptible Power Supply). The **SMART COMPACT UPS** provides high-quality protection for a PC, a network workstation, or any small Internet-connected device. The **SMART COMPACT UPS** includes built-in line conditioning known as AVR (Auto-Voltage regulation), the best technology for protecting your PC against all power disturbances, including power blackouts, power surge and power sag. Your choice of the **SMART COMPACT UPS** means you are working smart, protecting your PC against power irregularities, and protecting yourself against data loss.

2.2 In case of ac mains power failure

In the event of a power failure, the **SMART COMPACT UPS** supplies stable backup power to your computer (or other connected device) from internal batteries. There is no interruption of power to your computer.

The **SMART COMPACT UPS** informs you of the loss of ac power by lighting the orange LED on the front panel, and beeping every four seconds.

The length of time that the **SMART COMPACT UPS** can supply backup power depends on the power usage of the attached computer or other load, and on the level of battery charge.

In the case where the UPS is connected to a typical PC computer and the UPS battery is fully charged, you can count on at least three to five minutes of backup, enough time to save your work and shutdown the computer in an orderly fashion.

Printers typically draw large amounts of power, as do many household appliances. The **SMART COMPACT UPS** is not designed to provide large amounts of power so do not connect a printer or household appliances to the UPS.

Be aware that you need to charge the UPS batteries before your first use of the UPS. See section 4.3 on page 6.

2.3 Features of the SMART COMPACT UPS

- Transfer to backup mode is microprocessor-controlled.
- Automatic detection of ac input frequency (50/60 Hz).
- Reverts to power-saving “sleep mode” when the connected devices are not in use.
- Automatic Voltage Regulation for steady voltage.
- USB port for connection to a computer (see section 5.4).
- Can protect a modem or phone line from voltage spikes.
- Capable of “cold-starting” from the internal battery when there is no ac mains voltage.
- Automatic self-test at startup, and immediate notification of low battery and overload conditions.
- Protected against overload and against short-circuit in the attached equipment.
- Immediate notification of ac power failure via LED and audible alarm.

2.4 Included with your SMART COMPACT UPS

- Two power cables with male-female ends for connecting a computer and a monitor (screen) to the UPS.
- A USB-USB cable for connection between the PC and the UPS, and a software program on CD ROM for installation on the PC, which together make it possible to perform an orderly unattended shutdown of the computer in the event of an ac power failure.
- A warrantee certificate.
- A user guide (this book).

3. FRONT AND REAR PANEL OF THE UPS

The UPS features shown in Figures 1 and 2 are explained in Table 1.

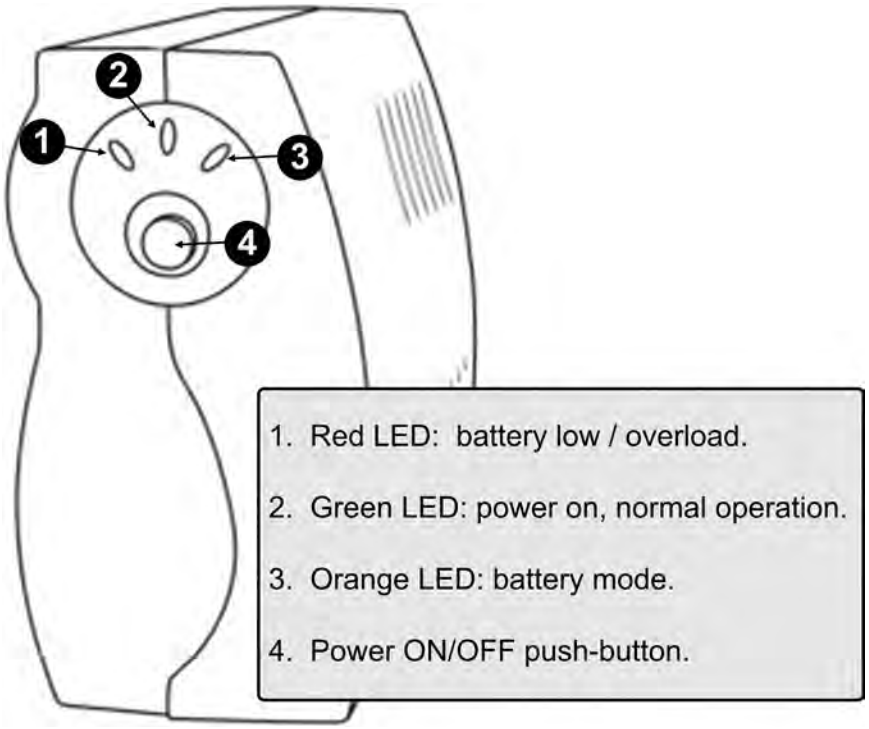

Figure 1 : Front view of the Smart Compact UPS

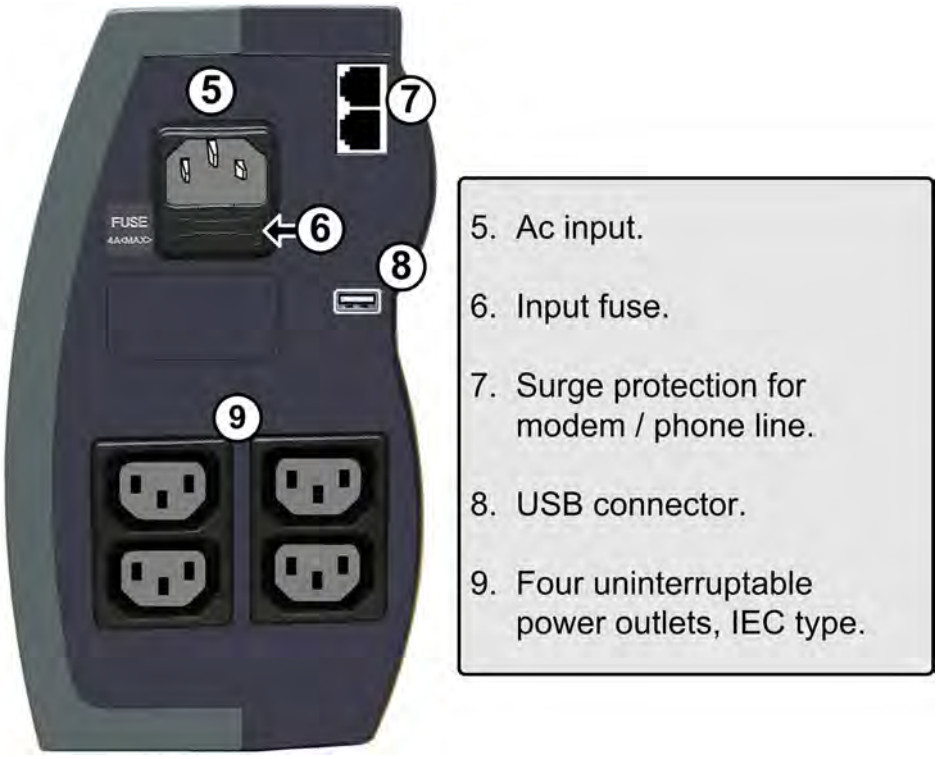

Figure 2 : Rear view of the Smart Compact UPS

Table 1 : UPS controls, indicators, and connectors

Item	Description
1. Red LED	When lit, indicates an overload condition, or a battery low condition.
2. Green LED	When lit, indicates that ac power is present and the UPS is operating normally, filtering the ac power and ready in the event of an ac failure.
3. Orange LED	When lit, indicates that an ac power failure has occurred and that the UPS is supplying power from its battery.
4. On/Off switch	Turns the UPS on and off. Also used to "cold start" the UPS from battery power when there is no ac power present.
5. Ac input connector	The ac input power cord is connected here.
6. Ac input fuse	Protects the UPS in the event of a short circuit or other case of input power overload. If it becomes necessary to replace the fuse, the new fuse must be of the same rating.
7. RJ11 ports for modem / phone line	These two female RJ11 ports – one for input and one for output – enable you to protect a single modem line or telephone line from power surges.
8. USB type A port	Used to connect the UPS to the computer if it is desired to use the unattended shutdown feature when a power failure occurs.
9. Ac output sockets	Supply stabilized ac power, and uninterrupted power in the event of an ac power failure.

3.1 Audible alarms

The **SMART COMPACT UPS** has an audible alarm - it beeps - to indicate any of several problem conditions. Table 2 explains how to understand the alarm.

The alarm can be silenced by pressing the ON/OFF button for 3 seconds and then releasing it.
The alarm will automatically be reactivated in the event of a new alarm condition.

Table 2 : Interpreting the audible alarm

Type of beep	Meaning
Every 4 seconds	The UPS is supplying power from the UPS battery due to a failure or other irregularity in the normal ac power. On certain models the alarm can be silenced by pressing and holding the On/Off switch for 2 seconds.
Every 1 second	Battery voltage is low.
Continuous	Overload condition.

4. INSTALLATION INSTRUCTIONS

4.1 Site preparation

The **SMART COMPACT UPS** is designed to operate in a wide variety of work environments. To ensure long and satisfactory service from your UPS:

1. Choose a location for the UPS that is well ventilated and dust-free, close to the ac power supply and to the device to be protected.
2. Ensure at least 20 cm of clearance space between the ventilation holes of the UPS and other objects and walls.
3. Ensure that the UPS's ventilation holes do not become obstructed.

4.2 Access to the UPS

All UPS controls and indicators are on the front panel.
All input and output cable connections are on the rear panel of the UPS.

4.3 Before first use, the UPS Battery must be charged

Before first use of the UPS, its batteries must be charged.
To charge the UPS batteries:

1. Plug the UPS into the ac power main
2. Turn on the UPS by pressing the ON/OFF button for 6 seconds.
3. Leave the UPS in this state for at least 8 hours, with no devices connected to it.
4. After 8 hours, the UPS is ready for use.

4.4 Installing the SMART COMPACT UPS

To prepare the UPS for first use:

1. Ensure that the ac power mains voltage is either 110 Vac or 230 Vac.
2. Connect the UPS ac input to the ac power main. For this purpose you can disconnect the computer's ac input cord from the computer and connect it to the UPS (see Figure 2 on page 4).
3. Using one of the supplied power cords, connect the computer's ac input socket to one of the UPS's power outlets on the rear of the UPS. (See Figure 2 on page 4, and Table 1 on page 5.)
4. If your computer monitor (the screen) draws power from the computer, it is already protected by the fact that you have plugged the computer into the UPS's protected power output. If the computer monitor is connected directly to the ac power line, unplug the monitor from the ac mains and plug it in to one of the protected outlets on the rear of the UPS. (See Figure 2 on page 4, and Table 1 on page 5.)

5. OPERATION INSTRUCTIONS

5.1 Starting the UPS

5.1.1 Performing a regular (“warm”) start

1. Start up the UPS by pressing and holding the On/Off button on the front panel for four seconds. The UPS performs a self-check and begins to operate, using the ac input power.
2. Verify that the green LED on the front panel of the UPS is lit.
3. You can now turn on the computer or other device and use it as normal, knowing that it is now protected against voltage surges and sudden ac cutoff.

5.1.2 Performing an emergency (“cold”) start

In the event of a power outage that occurred when the UPS was off, the UPS can be started on battery power to supply a few minutes of power to the computer or other load device.

Be aware that in cold-start mode, in order to conserve battery power the UPS performs no self-test at startup.

The actual length of time the load device can be operated in this mode depends on the power consumption of the load device and the battery charge level.

To perform a cold start of the UPS:
press the On/Off button for 6 seconds.

5.2 Turning off the UPS

1. Turn off the computer or other load devices connected to the UPS.
2. Press the On/Off button on the UPS front panel for about 6 seconds.
   The orange LED lights up, then the red LED. Following this the UPS shuts off.

5.3 Testing the UPS batteries

When the UPS is operating, you can simulate an ac power outage and cause the UPS to work off of its batteries by pressing and holding the On/Off button for six seconds. Verify that the orange LED comes on; this indicates that the UPS is working in battery mode.

It is recommended that you conduct the battery test when a computer or other device is connected to the UPS and turned on. This verifies that the UPS supplies power properly when there is no ac power.

5.4 Installation and use of the monitoring software

The Smart Compact UPS is delivered with a disk containing software that can be used to automatically perform an orderly shutdown of a computer in the event of an ac mains failure. The software also enables you to monitor the status of the Smart Compact UPS from a computer.

The software is compatible with the following operating systems:

- WINDOWS : 95, NT4.0, 98SE, ME, 2000, XP, VISTA 32bits, VISTA 64bits.
- LINUX : Redhat 7.0~7.3, Mandrake 8.2
- NOVELL : 4.X , 5.1

1. Connect one end of the supplied USB-USB cable to the USB port on the UPS rear panel. Connect the other end of the cable to one of the computer's USB ports.
2. Place the supplied CD ROM in the computer's CD ROM reader. The installation wizard will start up automatically on most computers. If it does not start automatically, display the CD ROM's directory, and run the **`setup`** file.
3. Follow the instruction of the software wizard to complete the software installation.
4. Simulate a power outage by holding the On/Off button for six seconds. Verify that the orange LED lights up; this indicates that the UPS is working in battery mode. Verify that the computer performs an orderly shutdown after the time you have defined in the shutdown software has elapsed.

6. TROUBLESHOOTING

The UPS advises you of exceptional condiditions by means of its LEDs and a beeping alarm. Table 3 outlines some of the most common problems, and their solutions.

Table 3: Troubleshooting

Problem	Probable cause	Possible solution
The UPS does not start up, even though the input ac power is OK.	1. Input ac cable not properly connected to the UPS or to the ac power lines. 2. The fuse on the UPS's input line has failed.	1. Properly connect the input ac cable to the ac socket and to the UPS. 2. Replace the UPS's input fuse with a fuse of the same type and rating.
The UPS starts up, but the red LED is lit.	The UPS battery voltage is low due to an extended ac power outage.	When the ac power returns, charge the UPS battery for at least 8 hours by leaving it on and connected to the ac power but with no load.
The UPS does not provide backup for the expected length of time.	The battery is not properly charged. This could be due to: 1. An extended power outage; 2. Overload (too many devices connected to the UPS); 3. The battery is approaching the end of its useful life.	1. Charge the UPS battery for at least 8 hours by leaving it on and connected to the ac power mains, but with no load. 2. Turn off unnecessary load devices and disconnect them from the UPS. 3. Replace the battery.
The red LED is lit and the UPS emits a continual beep.	UPS failure.	Disconnect the power cable from the UPS and contact your UPS salesperson for support information.

7. SERVICE AND REPAIRS

Gamatronic maintains a team of service technicians, repair laboratories, and an ample inventory of spare parts, dedicated to the service and repair of our products. When service is required, it will be performed either at the customer's site or in one of our laboratories, according to the judgment of our technician and the specifics of the service agreement between the customer and Gamatronic.

In regards to service, oral agreements have no standing. Service shall be provided gratis during the warrantee period, on the condition that the UPS has been properly maintained and a written record has been kept of any maintenance performed on the system.

The initial warrantee period can be extended by a written service agreement between Gamatronic and the customer. Without a written agreement, Gamatronic is under no obligation to provide service after expiration of the initial warrantee period.

Gamatronic will not be responsible for maintenance or changes to the UPS that are performed by an agent without written authorization from Gamatronic.

8. SYSTEM SPECIFICATIONS

MODEL	**SCE-650**	**SCE-750**	**SCE-1000**	**SCE-1500**
CAPACITY	**650 VA**	**750 VA**	**1000 VA**	**1500 VA**
INPUT				
Voltage	230 Vac			
Voltage range	+25 % / -25 %			
Frequency	50/60 Hz (auto-sensing)			
OUTPUT				
Voltage	230 Vac ±10 %			
Frequency	50/60 Hz ±0.5 Hz			
Transfer time	2 ms - 4 ms (typical)			
Voltage regulation	Automatic buck and boost regulation			
Sockets	4 IEC type			
BATTERY				
Type	Sealed, lead-acid, maintenance free			
Capacity	12 Vdc			
Recharge time	4 Hrs. (to 90% of full capacity)			
Protection	Self-diagnostics at power-up			
PROTECTION				
Spike protection	350 Joules over 2 ms			
Unit input	Fuse for overload and short circuit protection.			
Overload	Automatic shutdown when load over 110 % for 60 s, or over 130 % for 5 s.			
Short circuit	Input fuse protection; UPS output cuts off immediately.			
ALARM				
Battery back-up	Beep every 4 s			
Battery low	Beep every 1 s			
Overload	Continuous beep			
INDICATORS				
Green LED	Power on / normal operation			
Red LED	Battery low / overload			
Yellow LED	Battery mode			
GENERAL				
Standard features	Auto-sensing of input frequency. Cold start function. UPS auto restart. Green mode: inverter auto-shutdown when no load. Telephone/modem protection (RJ11). USB communications interface.			
Auto shutdown and monitoring software	Compatible with Windows (95, NT4.0, 98SE, ME, 2K, XP, Server 2003, Vista) Linux (Redhat 7.0 - 7.3 and Mandrake 8.2); Novell (4.x, 5.1)			
ENVIRONMENT				
Altitude	<5000 m			
Temperature	0 °C - 50 °C			
Humidity	0 % - 90 % (non-condensing)			
Audible noise	<40 dBA @ 1 m			
STANDARDS				
Noise suppression	CE, EN50091, FCC Class B, VCCI, BSMI			
Surge suppression	IEEE587 & EN61000-3-2			
Safety	EN50091-1			
DIMENSIONS				
HxWxD	202 x 110 x 275 mm			
Weight (net)	4.4 kg	5.3 kg	5.9 kg	6.4 kg

All specifications are subject to change without prior notice.